12 US CLAIMS

- Method of laser welding at least two sheets (4, 5; 87, 88) along a zone (6; 89) of overlap of these sheets, characterized in that at least a first (5; 88) the sheets comprises, near the zone of overlap, stiffening means (74) designed to resist the bending of the sheet (5; 88) along the zone (6; 89) of overlap, in that at least one region of the first sheet (5; 88) is made to project, cantilever fashion, into the zone (6; 10 89) of overlap, the stiffening means being located near this cantilevered region, in that a pressing mechanism of a laser welding installation (2) is made to press against another sheet (4; 87) so as to hold the sheets in contact with one another at the zone (6; 89) 15 overlap, and in that the laser welding installation is used to weld the sheets together along the zone of overlap.
- Method according to Claim 1, characterized in
 that the stiffening means comprise a profiled part (74) formed as an integral part of the first sheet (5; 88).

25

- 3. Method according to Claim 2, characterized in that the profiled part (74) is formed by bending the first sheet (5; 88) away from the zone (6; 89) of overlap, close thereto.
- 4. Method according to Claim 2, characterized in that the profiled part is a thickened part of the first sheet (5; 88).
- 5. Method according to any one of Claims 1 to 4,

 30 characterized in that a laser beam (52) emitted by the welding installation (2) passes through the other sheet (4; 87) to weld it to the first sheet (5; 88) at those of their surfaces which face one another in the zone (6; 89) of overlap, the method thus constituting a laser transparency-welding method.
 - 6. Railway vehicle body (81) comprising at least one support framework (840) and an external skin (86), the external skin (86) comprising a collection of sheets (87; 88) welded together at zones (89) of

overlap and welded to the support structure (840), characterized in that welds connecting the sheets of the skin together are produced by a method according to Claims 1 to 4.

Railway vehicle body (81) comprising at least one support framework (840) and an external skin (86), the external skin (86) comprising a collection of sheets (87; 88) welded together at zones (89) of overlap and welded to the support structure (840), characterized in that welds connecting the sheets of the skin together are produced by a method according to Claim 5.